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Mr. Jos. Schrenk read a note on the parasitism of *Aphyllon uniflorum*, T. & G. This communication gave rise to considerable discussion in regard to other parasitic plants, such as *Monotropa* and *Epiphegus*.

Mr. Brown stated that he had recently detected a foreign species of *Orobanche* on the ballast heaps at Hunter's Point, which was growing at some distance from any other plants and did not appear to be parasitic, but that the matter needed further and closer investigation than he had given it. After a lengthy discussion of *Monotropa uniflora*, L., which was taken part in by Dr. Newberry, and Messrs. Wright, Britton, Leggett and others, Mr. Braman promised to study the plant's mode of life during the present season, and report thereon.

Mr. Britton read a paper on the "Northward Extension of the New Jersey Pine Barrens Flora on Long and Staten Islands."

Two names were proposed for active membership.

On motion the Club adjourned to meet during the months of July and August on call of the Secretary, and at such places as he may select.

§ 45. New or Little-known Ferns of the United States. No. 8.

24. *Aspidium conterminum*. Willd., var. *strigosum*.—This is the name which seems proper to be borne by a fern discovered by Capt. J. Donnell Smith, last March, in a miry swamp which drains into Peace Creek, Polk Co., Florida. The fern is related to *A. Noveboracense* and more closely to *A. Nevadense*, and belongs to a group of forms referred to *A. conterminum* in *Synopsis Filicum*, but divided into several species by Fée, Fournier, and other writers. The form found in Florida agrees perfectly with an authentic specimen of *A. strigosum*, collected in Guadeloupe by L' Herminier, and described by Fée in his *Histoire des Fougères et des Lycopodiacees des Antilles*, p. 78. t. XXII, fig. 2. It is also identical with *A. exsudans*, var. *majus*, of Fournier (Pl. Mex., Crypt. p. 93), as shown by a comparison of authentic specimens. From the more strictly limited *A. conterminum* it differs by the shorter stalk, and the more rigid frond, the under surface of which is copiously dotted with resinous globules, and by the presence of minute mamillate glands on the sides of the rachis at the insertion of each pinna. The character written for the Appendix of the "Ferns of North America" reads thus: "Root-stock stout, erect, often rising above ground, bearing a crown of fronds; fronds 1 to 4 feet long, puberulent and glandular beneath, very short-stalked, lanceolate, caudate-acuminate, much narrowed at the base, somewhat rigid, pinnate; pinnae sessile, narrowly lanceolate from a broader base, acuminate, deeply pinnatifid into oblong obliquely sub-falcate obtuse segments; veins free, simple; sori near the margin; indusium reniform, minute, glandular and somewhat pilose, evanescent."

A peculiarity, pointed out to me by Capt. Smith, is that the base of the stipe, for a little distance, is narrowly wing-margined on both sides by a protrusion of the parenchyma through the outer sclerenchymatous sheath. This is seen best by cutting a thin cross-section

of a stalk which has been soaked a long time in warm water. The rhizome is mostly erect, often standing nearly a foot out of ground, and with its circle of spreading fronds gives the plant the aspect of a miniature tree-fern.

25. **Notholaena nivea**, Desvaux.—Root-stock short, chaffy with narrow scales; stalks clustered, wiry, black and polished; fronds 3 to 6 inches long, pyramidal-ovate, tripinnate; primary pinnae mostly opposite, the rachises nearly straight; pinnules 2 to 3 times as long, ovate or oval, obtuse, entire or more or less lobed, smooth and green above, beneath densely white-pulveraceous, sporangia brown, often descending the free veins more than half-way to the midvein.

Arizona, the particular station not given; Mr. J. G. Lemmon, collected very recently. This fern is so closely related to *N. Fendleri* and *N. dealbata*, that the three might almost be considered forms of one species. *N. nivea* has narrower fronds than *N. Fendleri*, its rachis is straight, the principal pinnae are opposite, and the frond is less compound, and has larger pinnules. *N. dealbata* is a smaller plant, the fronds more compound and the pinnules much smaller. *N. nivea* occurs commonly in Mexico, and its range extends southwards to Peru.

26. **Notholaena Lemmonii**, *sp. nov.*—Root-stock short, scaly with narrow pointed rigid dark-brown chaff; stalks dark reddish-brown, wiry, 4 to 6 inches long, chaffy at the base with scales a little wider and more scarious-margined than those of the root-stock, otherwise smooth; fronds 6 to 9 inches long, 1 to 1½ inches wide, linear-oblong, pinnate with numerous deltoid or ovate once or twice pinna-tifid pinnae, the lowest ones a little shorter than the middle ones; upper surface herbaceous-green, smooth; lower surface covered with white or slightly yellowish ceraceous powder; sori forming a narrow sub-marginal line; margins of the segments very slightly recurved.

Found in the clefts of granite rocks, on the southern side of the Santa Catarina Mountains, near Fort Lowell, and the town of Tucson, Arizona, by Mr. J. G. Lemmon (now residing at Oakland, California) in the Spring of 1880.

This fern evidently belongs to the same group of *Notholaena* (§ *Cinnalis*) as *N. candida*, but differs from that species essentially in the long and narrow fronds, having also the lowest pair of pinnae smaller than the others near it, instead of being much the largest of any. From *N. Grayi*, its larger size, and the total absence of chaff from the frond will easily distinguish it. Mr. Lemmon is the discoverer of several of our rarer Californian ferns, and it is with real pleasure that I am able at last to name a fern of his own discovery in his honor. His Arizona collection, not yet distributed, contains many other rare ferns of interest, such as *Notholaena candida*, *Hookeri*, *dealbata*, *Parryi*, *sinuata* and *ferruginea*, *Cheilanthes myriophylla*, *Fendleri*, *Lindheimeri*, *Wrightii*, *Eatoni*, *Gymnogramme hispida*, *Pellaea Wrightiana*, etc., etc.

27. **Phegopteris calcarea**, Fée.—This European fern, though often attributed to North America, has only very recently proved its right to a place among our ferns. It was collected a few years ago by Miss Ellen W. Cathcart on slaty rocks, on the bank of the

St. Louis River in Eastern Minnesota. From our common *P. Dryopteris* it differs in having a glandular stalk and fronds, the latter more erect and rigid, and having smaller pinnae on the lower side of its primary divisions. An account of it will be found on page 277 of the "Additions and Corrections" of the "Ferns of North America"—*Aspidium conterminum* and *Notholaena Grayi* were received just in time to be mentioned in that work, but *N. nivea*, and *N. Lemmoni* have only come to hand when the last pages of the book are already printed.

D. C. EATON.

New Haven, June 21, 1880.

§ 46. **Wolffia (Wolffiella) gladiata**, Hegelm, (*die Lemnaceen, eine monographische Untersuchung*, 1868, p. 133, Taf. III, fig. 24) var. **Floridana**.—Frons lineari-falcata, in apicem flagelliformem attenuata, 15–20-plo longior quam latior, margine subintegra, per omnes partes fere ad apicem cavernosa, totâ superficie cellulis pigmentosis ochraceo-punctata.

Hab. Gainesville, Fla., Nov., 1877, H. W. Ravenel; (specimens in Herb. Harvard University from Dr. Geo. Engelmann under the name of *W. gladiata*, Hegelm.)—Great Gulf Hammock, Levy Co., Fla., growing in extensive and thick mats on or near the surface of stagnant water with *Lemna minor*, L., March, 1878, C. F. Austin and J. D. S.—Exsiccated swampy ground, Sumter Co., Fla., adhering to *Riccia natans*, L., var. *terrestris*, March, 1879, J. D. S.—Borders, exposed by the subsiding water, of a pool near Ocala, Fla., with *Wolffia Columbiana*, Karsten, *Lemna polyrrhiza*, L., *L. minor*, L., and *Amblystegium riparium*, Br. & Sch., April, 1879, J. D. S.—Very abundant over marshes of *Typha latifolia*, L., four miles east from Cedar Keys, Fla., March, 1880, J. D. S.

Matured fronds are 3" to 4" long, diminishing in breadth from 0.2" near the base to 0.04" at the apex. The base is arcuately truncate with the stipitate angle hastate. The stipe is articulated, sub-persistent, and 0.35" long. The pouch (*fovea*, *Taschengrube*) is elongated, acuminate, 0.6" long, and at its mouth 0.3" broad. The apical portion only of the frond ($\frac{1}{8}$ – $\frac{1}{10}$ of its length) is destitute of air-cavities. Usually 2, and sometimes 3 to 6, vegetative generations cohere. It is readily distinguishable from any described Cis-Mexican form of *Wolffia* by its elongation, but better by the character of the sub-genus, viz: "**Wolffiella**. Frons pone marginem lateralem foveae basilaris proliferæ frondi maternæ affixa, directione horizontali symmetrica. Plantæ tantum steriles notæ." (Hegelm. Lemnaceæ in Martius' Flora Brasiliensis, fasc. LXXVI, 1878).

In the plant from Mexico, described as *W. gladiata*, the air-cavities do not extend to the anterior $\frac{1}{4}$ — $\frac{1}{5}$ part of the frond, or to the portion forming the pouch; the sabre-shaped frond is one-half shorter in proportion to its breadth, and with a 4 to 5 times broader rounded apex.

Dr. Hegelmaier writes as follows in regard to specimens of this plant submitted to him for examination under the name of *W. Floridana*, n. sp.:

"The plants from all four stations belong strictly to the same